

YOUNGSTOWN, Ohio – As leaders from throughout the Mahoning and Shenango valleys huddled under a tent erected on West Boardman Street to stay out of the rain Thursday afternoon, U.S. Rep. Jason Altmire acknowledged they could have used the technology being developed behind them.

"We should have figured out a way to print up a bigger tent, because that's the kind of thing that they'll be able to do in the future," said Altmire, D-4 Pa.

Business Journal Daily

By: George Nelson, September 28, 2012

YOUNGSTOWN, Ohio – As leaders from throughout the Mahoning and Shenango valleys huddled under a tent erected on West Boardman Street to stay out of the rain Thursday afternoon, U.S. Rep. Jason Altmire acknowledged they could have used the technology being developed behind them.

"We should have figured out a way to print up a bigger tent, because that's the kind of thing that they'll be able to do in the future," said Altmire, D-4 Pa.

Altmire's remark drew laughs from an audience ready to celebrate the potential represented by the new National Additive Manufacturing Innovation Institute behind him. A ribbon cutting and opening ceremony was held yesterday for the center, which was announced just last month. The \$70 million initiative was spearheaded by the National Center for Defense Manufacturing and Machining and the Cleveland-to-Pittsburgh Tech Belt, and beat funding proposals from collaboratives that included the Massachusetts Institute of Technology and Georgia Tech. NAMII, which was awarded \$30 million in federal money to match \$40 million contributed by the

partnership, is based in a building on the Youngstown Business Incubator campus.

The Obama Administration's program that led to the awarding of the NAMII contract is intended to tie the U.S. departments of Defense, Energy and Commerce to local universities and manufacturers, said Barb Ewing, the YBI's chief operating officer. "At its most fundamental level, the goal of this program is to restore American manufacturing to its predominant position in the world's economy, to rebuild our industrial base and to create jobs for our future," she said.

"It can change the game," said Ralph Resnick, NCDMM president and executive director, who is also serving as NAMII's acting director.

"The technology has the capability of revolutionizing the way we make things," he continued. "It's essentially growing parts versus subtracting material to make parts." In addition to allowing "new designs that we're not capable of making right now," the technology permits the integration of electronics and allows different materials to be "functionally graded through" a manufactured part, for strength in one area, for example, and corrosion resistance in another, he said.

"This is a transformational moment in time for our community," observed U.S. Rep. Tim Ryan, D-17 Ohio. To pull the Tech Belt together and have the hub of this "new age manufacturing" in Youngstown is extremely significant, not just because of the more than \$70 million investment, he said. "The spinoff of creating the next generation of manufacturing coming out of Youngstown is going to benefit all the businesses around, and it's going to be like a magnet to the Mahoning Valley."

Throngs of visitors attending the open house portion of the event wandered through the NAMII building, observing how software-guided devices employ technology similar to a printer to form shapes from various extruded materials. Companies including 3D Systems and X1 have "entrusted" NAMII with equipment for the center. "We look to make great use of these valuable assets as we establish NAMII as the U.S. center of additive manufacturing technology," Resnick said.

What is taking place in the NAMII center is the "very beginning stages of something that we

can't even dream where it's going to end up, but it's all going to happen right here in the Tech Belt," Altmire added.

Altmire recalled that he and Ryan formed the Tech Belt initiative as a result of their discussions of area sports teams that later came to encompass the region's other assets. He knew the Tech Belt had arrived when people in Pittsburgh applauded the award of the NAMII center to Youngstown, he said. "That's never happened before. That [state] border had been a brick wall," he remarked. "Now we're working together and we consider this to be a victory for all of us."

"The best thing about this technology is that there are no limits to its application, from organs to little plastic component to little covers your cell phone," Ryan said. "Some are anticipating being able to do buildings with it at some point down the line."

During the ceremony, much praise was expressed for the collaborative efforts that formed the Tech Belt initiative and the NAMII proposal.

When federal officials announced the selection of the Tech Belt proposal to secure the National Network of Manufacturing Innovation's pilot program in additive manufacturing, the YBI building that now houses the NAMII center "was nothing more than a shell of a building," Ewing said. "This project truly is a federal, state and local partnership," she remarked. Without the resourced provided by the partnership, "This institute would have gone elsewhere."

Part of the local contribution was approved earlier Wednesday, when the Youngstown Board of Control approved a \$20,000 façade grant for the building. "The city of Youngstown was asked repeatedly to support this project, and every time – and I do mean every time – they found a way to make that happen," Ewing remarked. "They did this because they see innovation as an opportunity, not as a threat."

T. Sharon Woodberry, city economic development director, said when she was first contacted about the project, additive manufacturing technology wasn't something she could easily wrap her mind around. "But the overall goal of helping strengthen our manufacturing base is something that the city wholeheartedly supports," she said.

Ewing, who emceed Thursday's event, also drew frequent praise from the speakers during a program that referenced quotes and stories about notables from athletes and coaches to the late technology pioneer Steve Jobs.

"Barb Ewing is a tremendous asset to this community," said Ryan, who formerly employed her in his congressional office before she left to take her current position at YBI.